

Please also see Federal Domestic Quarantine 301.92 for regulations on the interstate movement of regulated articles.

3700. OAK MORTALITY DISEASE CONTROL

State Miscellaneous Ruling

Restrictions are hereby established against this pest, its hosts, and possible carriers.

(a) **Pest.** A fungus, *Phytophthora ramorum*, which causes oak mortality disease (sudden oak death).

(b) **Regulated Area.** The regulated area for the pest is:

(1) The entire counties of Alameda, Contra Costa, Humboldt, Marin, Mendocino, Monterey, Napa, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma.

(c) **Articles and Commodities Covered.** The following are declared to be hosts or potential carriers of the pest:

(1) Plants and plant parts (except acorns or seed) of andromeda (*Pieris formosa*), black oak (*Quercus kelloggii*), coast live oak (*Quercus agrifolia*), Shreve's oak (*Quercus parvula* var. *shrevei*), tanoak (*Lithocarpus densiflorus*), rhododendron (*Rhododendron* species, including azaleas), California bay laurel (*Umbellularia californica*), madrone (*Arbutus menziesii*), huckleberry (*Vaccinium ovatum*), and arrowwood (*Viburnum x bodnantense*), bigleaf maple (*Acer macrophyllum*), California buckeye (*Aesculus californica*), California coffeeberry (*Rhamnus californica*), a honeysuckle (*Lonicera hispidula*), manzanita (*Arctostaphylos manzanita*), **Mariesii-doublefile** **Viburnum** (***Viburnum plicatum* var. *tomentosum***), Toyon or Christmas berry (*Heteromeles arbutifolia*) and Western star flower (*Trientalis latifolia*);

(2) Basal trunk/burl sprouts, small branches (less than one inch in diameter), and leaves (needles) of coast redwood (*Sequoia sempervirens*) and Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*);

(3) Small branches (less than one inch in diameter) and leaves of canyon live oak (*Quercus chrysolepis*);

(4) Leaves of camellia (*Camellia japonica*) and **Sasanqua camellia** (***Camellia sasanqua***);

(5). **Leaves and stems of Brouwer's beauty andromeda** (***Pieris floribunda* x *japonica***), **forest flame andromeda** (***Pieris formosa* x *japonica***), **variegated and flaming silver andromeda** (***Pieris japonica***), and **witch hazel** (***Hamamelis virginiana***).

(6) Plants and Stems of laurustinus (*Viburnum tinus*);

(7) Unprocessed wood and wood products (except when completely free of bark) and plant products of the plants in paragraph (c)(1), including but not limited to bark chips, mulch, firewood, and dried or preserved wreaths;

(8) Any other product, article or means of conveyance when it is determined by the secretary, based upon generally accepted scientific principles, that it presents a risk of spreading the pest because it is a host or potential carrier of the pest.

(d) Restrictions.

(1) Articles and commodities covered in subsection (c) are prohibited movement from the regulated area except as provided in paragraph (A), (B) or (C) below:

(A) If accompanied by a certificate issued by an authorized agricultural official affirming that the articles and commodities have been:

1. produced and maintained in an area which has been surveyed by an authorized agricultural official in a manner approved, based upon generally accepted scientific principles, by the secretary to detect the pest and the area has been found to be free of the pest; or,
2. grown, produced, manufactured, stored, or handled in a manner approved by the secretary, based upon generally accepted scientific principles, by the secretary to prevent infestation by the pest; or,
3. tested in a manner approved, based upon generally accepted scientific principles, by the secretary to detect the pest and found to be free of the pest.

(B) If the article or commodity does not meet the conditions in paragraph (d)(1)(A), it may nevertheless be moved if a permit is issued by an authorized agricultural official specifying the required containment conditions necessary to prevent potential spread of the pest; the article or commodity covered; the destination; and the handling, utilization, or processing which is authorized by the official and the conditions under which this shall be conducted. If the issuance of a permit is denied, an appeal may be filed with the department as provided in subsection (e).

(C) If the article or commodity is being moved from outside the regulated area and is being moved through the regulated area by direct route and without delay.

(2) At the retail level, articles and commodities covered are prohibited movement from the regulated area except when the person in possession has proof of purchase showing the commodity was purchased from a seller who is in compliance with paragraph (d)(1)(A).

(e) Appeal/Hearing Procedures.

(1) An appeal pursuant to paragraph (d)(1)(B) may be filed with the department within seven (7) calendar days of the date of denial of the permit. A hearing shall be conducted within 48 hours of an appeal that is timely filed. An appeal that is not timely filed shall be denied and no hearing shall be conducted in connection therewith.

(2) Hearings shall be conducted pursuant to Chapter 4.5 (commencing with section 11400) of Division 3 of Title 2 of the Government Code and these regulations.

(3) Hearings shall be presided over and conducted by a hearing officer designated by the secretary.

(4) Hearings may be conducted by telephone, at the discretion of the secretary.

(5) The decision of the hearing officer shall be in writing. The decision shall be in minute order form, containing only a brief statement of the conclusion and findings to support the conclusion. It may be handwritten.

(6) The decision shall be issued within 24 hours after the conclusion of the hearing and may be issued orally at the conclusion of the hearing subject to written confirmation.

(7) The written decision shall be served on the appellant or designated representative either by personal service or, if available, by facsimile transmission.

(8) The hearing officer's decision shall be final and not appealable to the secretary or any other officer of the Department.

(9) The appellant may seek judicial review of the hearing officer's decision by filing a petition for a writ of administrative mandamus in the appropriate court pursuant to Code of Civil Procedure section 1084 *et seq.*

(10) Hearings shall be recorded by audiotape.

(f) Unless this subsection is otherwise amended, section 3700 shall be repealed effective December 31, 2004.

Note: Authority: Sections 407, 5321 and 5322, Food and Agricultural Code.

Reference: Sections 24.5, 5321, and 5322, Food and Agricultural Code; Sections 11425.50 and 11440.10, Government Code; Section 1084 *et seq.*, Code of Civil Procedure.

ADDITIONAL HOSTS

APPENDIX 1 12/14/01
At this time, there are no known additional hosts.

ADDITIONAL INFESTED AREAS

APPENDIX 2 09/10/02

The following areas are considered to be infested with sudden oak death. These should now be treated as regulated areas; articles and commodities covered should be rejected under the Food and Agricultural Code, Section 6461.5, pending amendment of Section 3700.

At this time, there are no additional infested areas.

**REGULATORY SAMPLING GUIDELINES FOR
SUDDEN OAK DEATH (*Phytophthora ramorum*) -
INFESTED FOLIAR AND WOOD HOSTS**

APPENDIX 3

09/25/01

Suspect Sites

The general public's reporting of suspect sudden oak death (SOD) sites on privately-owned land should be made using the OakMapper (<http://camfer.cnr.berkeley.edu/oaks>), but the sampling will have to be prioritized and delegated to qualified individuals to obtain credible results. The public's reporting of suspect SOD sites on publicly-owned lands such as county, state and federal parks, open space districts, watersheds, etc., should be reported directly to the responsible officials for that land. Nursery personnel should report any suspect plants to the local county agricultural commissioner's office. Arborists, yard maintenance, tree services, and other related businesses should report suspect sites to the local county agricultural commissioner's office or to the local University of California Cooperative Extension's office. Private-foresters should report suspect sites on forestland to the landowner if it is a state or federal property or to the local California Department of Forestry and Fire Protection forester for that county. In all cases, every effort must be made to obtain enough information to "pinpoint" the site. Appendix A contains the local contact information for each infested county.

"Official" Samples

Only "official" samples can be used for making any decisions for regulatory purposes. "Official" samples are those taken by county, state and federal regulatory officials; and, authorized California University and Cooperative Extension, U.S. Forest Service, California State Parks, California Department of Forestry and Fire Protection, and other authorized personnel who are trained in the sampling, data collection and submission procedures. Every effort should be made to use global positioning system (GPS) units when sampling. This is critical to ensure uniformity in mapping positive and negative sites.

Submitting Samples and Determinations

The University of California's determinations have served as the basis for establishing the Oak Mortality Disease Control regulation. Now that the regulation is established, the California Department of Food and Agriculture's Plant Pest Diagnostics Branch (PPDB) shall make all determinations for which state regulatory action is to be taken. Federal regulatory action will be based on federal determinations unless the PPDB is authorized to perform diagnostics for the U. S. Department of Agriculture.

All regulatory samples taken from within the regulated area shall be submitted to PPDB. However, under a cooperative agreement, initial new county infestations will be determined

by Dr. Rizzo's laboratory at the University of California at Davis. Thereafter, samples shall be submitted to PPDB for diagnosis.

In general, the submission of samples should be coordinated when at all possible. Unless samples taken on Friday can be coordinated with and be driven to PPDB on the same day, sampling should not be performed until the following Monday, and then driven or sent via express carrier as outlined below.

Specific Sampling for Some Confirmed Hosts 09-07-01

Oaks and Tanoaks

The following are confirmed hosts: coast live oak (*Quercus agrifolia*), black oak (*Quercus kelloggii*), Shreve oak (*Quercus parvula* var. *shrevei*) and tanoak (*Lithocarpus densiflorus*). Symptoms on tanoaks may include drooping or wilting of new growth prior to the appearance of bleeding cankers. On oaks, such wilting does not occur. Instead, reddish-brown bleeding from cankers is the first visible symptom. When the seeping dries it often turns a tar-black color. Bleeding cankers should have a wine-like odor. If the bleeding is brownish-black and foul smelling, it can be an indication of a bacterial infection, not sudden oak death. These cankers are generally found on the lower 10 feet of the trunk/stem and do not occur below the soil line. Sometimes aerial cankers have been detected (up to 60 ft on tanoak). In advanced cases of the disease, bleeding may extend well up the main trunk and lateral branches. Removal of the outer bark reveals a zone of necrotic tissue delimited from healthy tissue by a dark zone line. Foliage changes occur in the advanced stages of decline. Color changes rapidly from healthy green to chlorotic yellow and finally brown. Leaves may cling to branches for up to one year after tree death.

Due to the difficulty in confirming the SOD pathogen from wood from suspect trees, you are strongly encouraged to also survey around any suspect trees and submit other symptomatic material from nearby hosts. It is often useful to look for symptoms on bay, blackened leaf tips.

To confirm that a symptomatic tree has the SOD *Phytophthora*, the pathogen has to be cultured on a special agar medium from a sample of the inner bark of the tree. Sampled bark pieces are placed in petri dishes containing pimaricin-ampicillin-rifampicin-PCNB agar (PARP), a selective media for *Phytophthora* species. Two protocols are presented here: the first for plating onto the PARP agar in the field prior to sending to the laboratory, and the second for sending samples to a laboratory for culturing. To obtain the PARP medium, contact the PPDB or your local UC Cooperative Extension office.

Equipment needs:

Axe or hatchet

Sterilizing agent (such as 70% ethanol, Lysol or 10% commercial bleach)

Pens for labeling samples

For plating: Scalpel or sharp knife

Forceps

PARP selective media in petri dishes

Tape to seal petri dishes

Paper bags and an appropriate box for sending samples.

Ensure all tools are sterilized prior to sampling and between taking samples.

For plating samples onto PARP medium in the field

1. Shave away the outer bark above or to the side of a seeping area and examine the lesion area until a canker margin (zone line) is evident.
2. Use the knife and forceps to excise small pieces (approx. 1/8" x 1/8" or smaller) of the phloem including both healthy and necrotic bark tissue on both sides of the zone line.
3. Place each phloem piece on the medium and push down until it is covered by the medium.
4. When you have 6 to 8 pieces of phloem inserted in the medium seal the plate with tape and label it, including the date, location, species, and identifying information (GPS) for the tree sampled. Repeat the same process on another plate (sample each tree using two plates).
5. Plates should be incubated in the dark at 68-72 degrees Fahrenheit and examined by the PPDB laboratory within seven days. Plates may be incubated longer if deemed necessary.
6. Mail plates to the PPDB laboratory for incubation and identification of the fungus.

For collecting samples to send to a lab

1. Ensure that transportation and laboratory facilities have been arranged such that samples will be processed and plated within 48 hours of collection. Shave away the outer bark approximately 6" above or to the side of a seeping area.
2. Shave away the bark in the area of the lesion until a canker margin (zone line) is evident.
3. Use the hatchet to remove a piece of phloem approx. 2" x 1" x 1" that includes the margin between healthy and diseased tissue.
4. Place the phloem piece in a paper bag. Label the bag with the date, location and identifying information (GPS) for the tree sampled.
5. Transport the samples to the PPDB laboratory for isolation and identification of the fungus.

The above was modified and condensed from, "Storer, A. J., K.E. Keirnan, N.K. Palkovsky, B.W. Hagen, G.W. Slaughter, N.M. Kelly and P. Švihra. 2001. Sudden Oak Death: Diagnosis and Management. University of California Cooperative Extension. Pest Alert 5." For a very detailed, color-illustrated, step-by-step procedure to sample

symptomatic oaks and tanoaks, see the following Website: <http://cemarin.ucdavis.edu/publications.html> and scroll down to the bibliography and select the article.

Common Rhododendron

On rhododendron, the symptoms include twig dieback and leaf spotting, usually not mortality. On rhododendron leaves, look for brown spots that have diffuse, fuzzy margins, rather than sharp margins such as would occur with sunburn injury (refer to Appendix B) and generally do not involve the midrib of the leaf. Also look for blackened shoots with or without foliage still attached. Collect living tissue if possible or whole small plants are also acceptable. If collecting individual shoots with or without attached symptomatic leaves, insert the freshly cut end of the shoot into a water-filled florist's stem vial, bag and send it via express carrier to the PPDB. When collecting small plants, place a plastic bag around the root ball and tie it off from the rest of the plant, and then place the entire plant into a larger plastic bag and do not seal it. Drive this type of sample to the PPDB laboratory. As a last resort, if the previous two methods are not feasible, simply enclose symptomatic leaves attached to shoots in a plastic bag with plenty of dry paper towels or newsprint and mail. This method reportedly gives poorer results with this disease, but is better than no sample at all. For additional photographs of symptoms, see the Website at: <http://camfer.cnr.berkeley.edu/oaks/Rhodies.html>.

California Huckleberry

On huckleberry, the symptoms include twig dieback and, in advanced stages, will kill canes down to the ground, killing all the above ground portions of the plant. Look for small, blackened twig cankers that are girdling the twigs (refer to Appendix C). Tissue beyond the twig cankers may be dried and/or wilted. Cut the twigs below the cankered regions (well into healthy tissue) and then, if possible, insert the freshly cut end of the twig into florist's vial, bag and send it via express carrier to the PPDB.

California Bay Laurel

On California bay laurel, the symptoms have been confined to leaf spotting, often surrounded by a chlorotic halo. Leaf spots are often at the leaf tip and may or may not have a blackened line at the border (refer to Appendix D). Anthracnose can also cause this symptom. Suspicious twig dieback symptoms have been observed on California bay laurel trees but the SOD pathogen has yet to be successfully isolated from such twigs. Samples of foliage and suspect blighted twigs should be taken just as for rhododendron foliage and shoots. If it is nursery stock (such as reforestation seedlings in planting "tubes"), place the entire plant in a plastic bag and drive or send the sample via an express carrier to the PPDB.

Madrone

On madrone, the symptoms include leaf spotting and cankers on small branches (refer to Appendix E). At advanced stages, the entire leaf and shoot turns black. Although there are many dead and dying madrones in the areas affected by the SOD pathogen, it is not known how much of this dieback can actually be attributed to the SOD pathogen and how much to other pathogens (e.g., *Botryosphaeria*, *Natrassia*, etc.). Sample similarly as with cankered huckleberry twigs, or as with rhododendron shoots and foliage and then send via an

express carrier to the PPDB.

California Buckeye

On California buckeye, the symptoms include leaf spots and cankers on petioles and small twigs (refer to Appendix F). However, the leaf spots appear to be more distinct around the margins. Cut the twigs below the symptomatic leaves and then, if possible, insert the freshly cut end of the twig into a florist's vial, bag and send it via express carrier to the PPDB.

California Oak Mortality Management Program Key Contacts in Affected Counties

Appendix A

02/26/02

Summary Agency Contact Responsibilities

California Department of Forestry and Fire Protection (CDF): Regulatory enforcement, survey, suspect sampling and research activities involving timber harvest restrictions on public and private forestlands.

California Department of Food and Agriculture (CDFA): Regulatory rulemaking, overall regulatory enforcement and survey guidelines, permits, and diagnostic support.

California Department of Parks and Recreation (CDPR): Regulatory enforcement, management and survey activities within state parks.

County Departments of Agriculture: Local regulatory certification, survey and enforcement activities for nurseries, firewood, green waste, biomass and landfill facilities, utility line clearing, and pesticide use enforcement.

United States Department of Agriculture, Forest Service (USDA/FS): Regulatory enforcement, surveys and research involving national forestlands.

University of California Cooperative Extension: General education, pest management strategies and research.

CDF contacts for timber harvest restrictions are listed under the appropriate county; general SOD non-forest practice contacts: Jill Butler, Phone: (707) 576-2735, Bruce Hagen, Phone: (707) 576-2736, Jack Marshall, Phone: (707) 462-8748

CDFA *regulatory* contact: Nick Condos, Phone: (916) 653-1440, Fax: (916) 654-0986, E-mail: ncondos@cdfa.ca.gov; *diagnostic* contact: Cheryl Blomquist, Phone: (916) 262-1100, Fax: (916) 262-1190, E-mail: cblomquist@cdfa.ca.gov; *detection* contact: Kathleen Kosta, Phone: (916) 445-6214, Fax: (916) 262-2059, E-mail: kkosta@cdfa.ca.gov.

CDPR contact: Stephen Bakken, Phone: (916) 654-9934, E-mail: sbakk@parks.ca.gov

USDA/FS contact: Susan Frankel, Phone: 707-562-8917, FAX: 707-562-9054, E-mail: sfrankel@fs.fed.us

Alameda

County Department of Agriculture, Ronnie Eaton, Phone: (510) 670-5232, Fax: (510) 783-3928, E-mail address: reaton@co.alameda.ca.us

Cooperative Extension, Sheila Barry, Phone: (408) 299-2635, E-mail address: sbarry@ucdavis.edu
CDF, Nancy Drinkard, Phone: (831) 335-6741
CDFA, Nick Condos, Phone: (916) 653-1440, Cell phone: (916) 831-3161, Fax: (916) 654-0986, E-mail: ncondos@cdfa.ca.gov

Marin

County Department of Agriculture, Fred Crowder, Phone: (415) 499-6700, Fax: (415) 499-7543, E-mail: FCrowder@marin.org
Cooperative Extension, Kim Keirnan, Phone: (415) 499-3041, E-mail: kkeirnan@marin.org
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Mendocino

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Cooperative Extension, Greg Giusti, Phone: (707) 463-4495, E-mail: gagiusti@ucdavis.edu
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CDFA, Nick Condos, Phone: (916) 653-1440, Cell phone: (916) 831-3161, Fax: (916) 654-0986, E-mail: ncondos@cdfa.ca.gov
USDA/FS, Mendocino National Forest, Blaine Baker, Upper Lake Ranger District, Phone: (707) 275-2361; Covelo Ranger District, Phone: (707) 983-6118; Jim Giachino, Grindstone Ranger District, Phone: (530) 934-3316; Jim Fenwood (Supervisor), (530) 934-3316

Monterey

County Department of Agriculture, Ken Corbishley (regulatory questions), Brad Oliver, (suspects or disease management strategies), Phone: (831) 759-7325, Fax: (831) 422-5003, E-mail: corbishleyk@co.monterey.ca.us (Ken Corbishley) oliverb@co.monterey.ca.us (Brad Oliver) agcomm@co.monterey.ca.us (General Delivery)
Cooperative Extension, Steve Tsjovold, Phone: (831) 759-7350, E-mail: satjosvold@ucdavis.edu, or, Mark Stromberg, E-mail: stromber@Socrates.Berkeley.edu
CDF, Scott Rosikiewicz, Phone: (831) 333-2600
CDFA, William Downer, Phone: (559) 445-5033, Fax: (559) 445-6880, E-mail: wdowner@cdfa.ca.gov
USDA/FS, Los Padres National Forest, John Bradford, Phone: (831) 385-5434

Napa

County Department of Agriculture, Phone: (707) 253-4357, Fax: (707) 253-4881, E-mail: napaag@cdfa.ca.gov
Cooperative Extension, Ed Weber, E-mail: eaweber@ucdavis.edu
CDF, Chuck Joiner, Phone: (707) 576-2344
CDFA, Nick Condos, Phone: (916) 653-1440, Cell phone: (916) 831-3161, Fax: (916) 654-0986, E-mail: ncondos@cdfa.ca.gov

San Mateo

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Santa Clara

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CDFA, Nick Condos, Phone: (916) 653-1440, Cell phone: (916) 831-3161, Fax: (916) 654-0986, E-mail: ncondos@cdfa.ca.gov

Solano

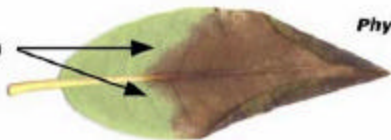
County Department of Agriculture, Linda Pinfeld, Phone: (707) 421-7465, Fax: (707) 429-0827, E-mail: lpinfeld@solanocounty.com
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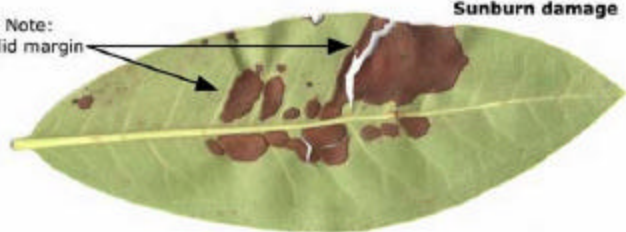
Appendix B

Note:
Diffuse margin



Phytophthora sp.

Note:
Solid margin



Sunburn damage

